Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (currently amended) An apparatus for controlling storage and playback of digital broadcasting contents in a transmitter of a digital broadcasting environment, comprising[[;]] :

an access control means for generating: (a) access control information for access control service and (b) a control word for scrambling;

a copy control information (CCI) generation means for generating copy control information;

a broadcasting flag (BF) generation means for generating broadcasting flag;

a retention information (RI) generation means for generating retention information;

a watermarking means for receiving the CCI, the BF and the RI and watermarking an uncompressed media signal with the CCI, the BF and the RI to thereby generate a watermarked media signal;

a media encoding means for compressing the watermarked media signal; a multiplexing means for receiving and multiplexing the watermarked and compressed media signal, the access control information, the CCI, the BF, and the RI to thereby generate multiplexed transport stream; and

a scrambling means for scrambling the multiplexed transport stream based on the control word and transmitting the scrambled transport stream.

2.   (original) The apparatus as recited in claim 1, wherein the CCI is information for determining whether a broadcasting content can be copied.

3.   (original) The apparatus as recited in claim 1, wherein the BF is information for determining whether a content is a broadcasting content.

4.   (original) The apparatus as recited in claim 1, wherein the RI indicates retention time of a broadcasting content when the broadcasting content is stored in a hard disk.

5.   (currently amended) An apparatus for controlling storage and playback of digital broadcasting contents in a receiver of a digital broadcasting environment, comprising[[;]] :

a personal information providing means for providing personal information to decode a scrambled transport stream;

a descrambling means for descrambling the scrambled transport stream based on the personal information;

a control information processing means for processing a copy control information (CCI), a broadcasting flag (BF), a retention information (RI), which are storage and playback control information included in the descrambled transport stream, and storing and playing back the broadcasting content;

an encrypting means for encrypting the broadcasting content to be stored;

a storing means for storing the encrypted broadcasting content;

a decrypting means for decrypting the stored broadcasting content;

a decoding means for decoding the descrambled and compressed transport stream; and

a playback allowing means for abstracting the CCI, the BF and the RI, which are watermarks, from the decoded transport stream, comparing the abstracted watermark information with the storage and playback control information, and determining whether to allow playback of the broadcasting content.

6.   (original) The apparatus as recited in claim 5, wherein the control information processing means changes the CCI included in the transport stream based on the kind of a broadcasting content, when the broadcasting content is stored.

7.   (original) The apparatus as recited in claim 5, wherein the control information processing means checks the BF included in the transport stream based on the kind of a broadcasting content, and stores and plays back the broadcasting content.

8.   (original) The apparatus as recited in claim 5, wherein the control information processing means checks whether the retention period is valid by checking the RI included in the transport stream based on the kind and service of a broadcasting content, and plays back the broadcasting content.

9.   (original) The apparatus as recited in claim 5, wherein the CCI indicates whether a broadcasting content can be copied and the BF indicates whether the content is an authentic broadcasting content, while the RI indicates retention time of a broadcasting content stored in the hard disk of the receiver.

10.   (original) The apparatus as recited in claim 9, wherein the playback allowing means abstracts the watermarked CCI, the watermarked BF, and the watermarked RI, compares the CCI, BF and RI which are abstracted as watermarks with the CCI, BE and RI included in the transport stream, and determines whether to allow the broadcasting content to be played back.

11.   (original) The apparatus as recited in claim 10, wherein a broadcasting content to be stored temporarily is not processed in the control information processing means, not encrypted in the encrypting means, and stored in the storing means directly and, when the broadcasting content is played back to an end, the broadcasting content which is delayed as much as temporarily stored in the storage means is deleted automatically.

12.   (original) An apparatus for storing and playing back digital broadcasting contents, comprising:

        a control information providing means for generating control information for recording storage, temporary storage, and playback of a broadcasting content, using the control information as watermarking information, multiplexing and scrambling the broadcasting content including the control information, and outputting a scrambled transport; and

        a storing and playback means for storing the broadcasting content by using the control information, comparing the control information stored together with the broadcasting content with control information added as watermarks, and determining whether to play back the broadcasting content.

13.   (original) The apparatus as recited in claim 12, wherein the control information includes CCI information for determining whether the broadcasting content can be copied, BF information for determining whether the broadcasting content is an authentic broadcasting content, and RI information for indicating retention time of the broadcasting content stored in a hard disk of the storing and playback means.

14.   (original) The apparatus as recited in claim 12, wherein the control information providing means includes;

an access controlling means for generating access control information for access control service and a control word;

a CCI generation means for generating the CCI;

a BF generation means for generating the BF;

a RI generation means for generating the RI;

a watermarking means for receiving the CCI, the BF, and the RI, and watermarking an uncompressed media signal by using the CCI, the BF, and the RI as watermarks;

an encoding means for compressing the watermarked media signal;

a multiplexing means for receiving and multiplexing the watermarked and compressed media signal, the access control information, the CCI, the BF, and the RI; and

a scrambling means for scrambling a multiplexed transport stream based on the control word and transmitting the scrambled transport stream.

15.   (original) The apparatus as recited in claim 12, wherein the storing and playback means includes:

a personal information providing means for providing personal information for decoding the scrambled transport stream;

a descrambling means for descrambling the scrambled transport stream based on the personal information;

a control information processing means for processing the CCI, the BF and the RI, which are the storage and playback control information included in the descrambled transport stream, and storing and playing back the broadcasting content;

an encrypting means for encrypting the broadcasting content to be stored;

a storing means for storing the encrypted broadcasting content;

a decrypting means for decrypting the stored broadcasting content;

a decoding means for decoding the descrambled and compressed transport stream; and

a playback allowing means for abstracting the CCI, the BF and the RI, which are watermarks, from the decoded transport streams compares the abstracted watermark information

with the storage and playback information, and determining whether to allow playback of the broadcasting content.